REMARKS

Claims 1 through 27 are currently pending in the present application. Claim 16 is amended and claims 28-31 are added. No new matter is introduced in the application by these amendments. The amendment to claim 16 to recite a half-life of the complexing protein in serum of greater than 1.0 hours is supported by the specification at p. 7, line 25. The recitation of the specific nucleic acid sequences SEQ ID Nos:1 and 2 in new claims 28 and 29 is supported by the specification at page 5, in the paragraph beginning on line 18 (as amended to recite sequence listing identifiers on October 15, 2001). Support for the recitation in new claims 30 and 31 that the blood coagulation protein bound by the aptamer is thrombin is supported at, e.g. Example 1 beginning on page 10 of the specification.

The Examiner requested that Applicant point out support for the prior amendments to the claims. The prior amendment to claims 1 and 13 merely incorporated a limitation from original claim 5. Dependent claims were amended to remove what were then redundant limitations.

New claim 16 incorporated into original claim 1 a limitation of original claim 7. New claims 17-27 recite limitations from original claims 2-14.

Entry of the present Amendment is requested, as it places the application into condition for allowance, or at least better form for appeal and raises no new issue for consideration or search by the Examiner.

Rejection Under 35 U.S.C. 112, First Paragraph

Claims 1-27 stand rejected under 35 U.S.C. 112, first paragraph. The Examiner alleges lack of written description. As Applicants have explained previously, the present invention relates to end-modification of an aptamer by a protein with the result that the half-life of the modified aptamer in the circulation is extended. Applicants assert that the present specification adequately describes the common structural feature, i.e. modification of the 5′ or 3′ end of a nucleic acid by a protein, that provides for this result. The particular sequence of the aptamer nucleic acid is not particularly relevant to the present invention. Furthermore, a large number of variations of the nucleotide sequence aptamers that bind to at least the blood clotting protein thrombin were well known in the art at the time the invention was made. *See, e.g.* R.F. Macaya et al., *Biochemistry* 34:4478-4492 (1995); M.K. Kubik et al., *Nucl. Acids. Res.* 22:2817-2822 (1994); D.M. Tasset et al., *J. Mol. Biol.* 272:688-698 (1997); N. Janjic et al., WO 95/21853; J.J. Toole et al., WO 92/14842 and

J.J. Toole et al., WO 92/14843. Copies of these articles are provided for the Examiner's convenient review and are listed on an accompanying Information Disclosure Statement.

The specification need not, and preferably does not, describe what is already known in the prior art. Thus, the specification need not describe in detail a plethora of nucleotide sequences of aptamers that bind specifically to blood coagulation proteins. *See, Spectra-Physics v. Coherent,* 3 USPQ2d 1737 (1987). Therefore, Applicants respectfully request withdrawal of the instant rejection under 35 U.S.C. 112, first paragraph.

A bit of housekeeping

WO 02/26932 (Sullenger et al.) was listed on the form PTO - 1449 submitted with Applicants' IDS filed September 18, 2002. However, the Examiner did not initial this reference and no explanation for this is given. Applicants presume this is due merely to oversight. The Examiner is requested to send another copy of the Form PTO-1449 of September 18, 2002, with the Sullenger '932 reference initialled, together with the next communication from the USPTO.

Applicants submit that the application well-describes and claims patentable subject matter. Withdrawal of the standing

rejection and the favorable action of allowance of the claims is respectfully requested.

If the Examiner has any questions regarding the above matters, please contact Applicants' representative, Mark J. Nuell, Ph.D., at the telephone number listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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4045-0109P

Attachments: Version with markings to show changes made

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, postage prepaid, in an envelope to: Commissioner of Patents and Trademarks, Washington D.C. 20231 on: February 25, 2003
(Date of deposit)

BIRCH, STEWART, KOLASCH & BIRCH, LLP

Lori M. Fill
(Signature)

February 25, 2003
(Date of Signature)

VERSION WITH MARKINGS TO SHOW CHANGES MADE

The following claims have been amended as follows:

16. (Amended) A composition comprising: a nucleic acid, that is derivatized at the 5′ or 3′ end or at both the 5′ and 3′ ends with a protein having a half-life in serum of greater than ~~1.5~~1.0 hours, that binds to a blood clot or to a protein that is a component of a mammalian blood clotting cascade, wherein said nucleic acid is 2′-fluoropyrimidine RNA or 2′-aminopyrimidine RNA.

New claims 28-31 are added.